

PATENT ABSTRACTS OF JAPAN

(11)Publication number : **59-113889**

(43)Date of publication of application : **30.06.1984**

(51)Int.Cl. **C12N 11/10**
// C12N 11/04

(21)Application number : **57-222604** (71)Applicant : **SUMITOMO**
CHEM CO LTD

(22)Date of filing : **17.12.1982** (72)Inventor : **YAMAMOTO**
HIDEFUMI
HIROHARA
HIDEO

(54) **PREPARATION OF IMMOBILIZED ENZYME OR IMMOBILIZED MICROBIAL CELL**

(57)Abstract:

PURPOSE: To prepare immobilized enzyme or immobilized microbial cell having high mechanical strength and capable of keeping the activity of the enzyme or microbial cell stably for a long period, by using an alginic acid salt and a carboxyl-containing polysaccharide as the gel components.

CONSTITUTION: (A) Enzyme or microbial cells and (B) a water-soluble polycationic polymer compound such as polyethyleneimine, chitosan, etc. are added to (C) an aqueous solution containing a polysaccharide containing carboxymethyl group in the molecule (e.g.

sodium alginate, carboxymethylcellulose, carboxymethylpullulan, etc.) and/or a water-soluble protein such as albumin, gelatin, etc., and the obtained mixture is made to contact with an aqueous solution containing calcium ion or aluminum ion to effect the gelatination of the solution and immobilize the enzyme or the microbial cells. If necessary, the surface of the obtained gel is treated with a polyfunctional crosslinking agent such as glutaraldehyde.